



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,309	03/12/2004	Nobuhiro Ishizaka	00862.023514.	5783
5514 7590 10/03/2008 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112				
EXAMINER				
DICKERSON, CHAD S				
ART UNIT		PAPER NUMBER		
2625				
MAIL DATE		DELIVERY MODE		
10/03/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,309

Applicant(s)

ISHIZAKA ET AL.

Examiner

CHAD DICKERSON

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, drawn to a printing apparatus that performs the feature of dividing a printing area into a plurality of regions for printing and has the image data stored in a print buffer, classified in class 358, subclass 502.
 - II. Claims 8-10, drawn to a printer driver that is executable in a host computer that outputs printing data to a printer, classified in class 358, subclass 1.15.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination Group I has separate utility such as a printing apparatus that is used to provide the feature of dividing a printing area in a scanning direction into a plurality of regions, having a print buffer store raster data that corresponds to the divided regions and converting this data into column data for printing. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR

1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

2. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement

may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. During a telephone conversation with Attorney Elizabeth Holowacz on 9/25/2008 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-6. Affirmation of this election must be made by applicant in replying to this

Office action. Claims 8-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Response to Arguments

5. Applicant's arguments, see page 7, filed 6/2/2008, with respect to the drawing objections have been fully considered and are persuasive. The objection of figure 3 has been withdrawn.

6. Applicant's arguments, see page 7, filed 6/2/2008, with respect to the specification objections have been fully considered and are persuasive. The objection of the specification has been withdrawn.

7. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. The amendment to the claims has necessitated a new ground(s) of rejection. However, the reference of Watanabe '289 is still being applied to the claims. The Applicant asserted that the features of (a) dividing a printing area in a scanning direction on a printing medium into a plurality of regions and has a print buffer for storing raster data corresponding to the dividing regions, (b) the size of the raster data stored in the print buffer is smaller than the size of image data

to be printed by one scanning and (c) the input means has a plurality of rasters are not taught by the Watanabe reference. The Examiner respectfully disagrees with this assertion.

When looking at the cited portions that the Applicant submitted for support for the amendments, the Examiner noted a critical discrepancy. Starting on page 24, the specification describes the input of information into the system shown in figure 4. Mentioned on page 25 is the image data (209 and 212) that is input into the reception buffer in a compressed state and the image data are divided into blocks. As shown in figure 5A and 5B and mentioned on page 25, the plurality of color data that makeup image data (209 or 212) (except the color change code) are stored as compressed data (see lines 14-19). At this point, the process of the invention has not reached the decompression stage since the image data is still in a compressed storing state. If the system had been past the decompression stage of the invention, the image data would be stored in the image conversion unit as uncompressed data. Here, the statement that *"data obtained by dividing, into blocks, a data amount smaller than a data amount necessary for printing by scanning the printhead once on the printing medium"* makes sense because compressed data is a data amount smaller than the decompressed data that is necessary for printing. With the above reasoning, the claim limitation added regarding the above statement is not supported by the Applicant's specification on pages 25 or 34. In most conventional systems, the Examiner realizes that in order to reproduce an image after compression, some decompression or decoding has to occur in order to print an image representing its original size. Therefore, the Examiner does

not know how the cited portions that were relied upon to support the corresponding claim amendment would enable one of ordinary skill in the art to make or use the Applicant's invention. Also, with the language related to the specification that was relied upon that is related to the reception buffer, the Amendment filed is rendered indefinite by the language that is used that appears to be different than the specification that describes the invention. Therefore, the rest of the claim language is examined.

Regarding the feature of Watanabe and Applicant's added feature of an input means having a plurality of rasters, the Examiner believes that the above feature is taught as well. When looking at the reference of Watanabe, the system contains a 4-line buffer that can store four lines of converted image data that has been decoded by a programmed process of the CPU (111). The decoded data represents data that is dot image data, considered as a raster, and this data is stored in the 4-line buffer. There are one-line representations that are decoded into a dot image, or a raster, stored in the 4-line buffer and the 4-line buffer is able to store 4 lines, two after resolution conversion and two lines before resolution conversion. The 4-line buffer is able to then contain a plurality of rasters when storing these lines. Since the receiver buffer (202) receives data of one line from the 4-line buffer, the receiver buffer receives data sequentially from the 4-line buffer if the receiver buffer is empty. Therefore, the sequential transfer of data from the 4-line buffer to the receiver buffer is performed. Lastly, since the image data of one line of an overall image is stored in the 4-line buffer, the divided regions of an overall image are used to be transferred to the receiver buffer (see col. 3, ln 47 – col. 5, ln 64).

Therefore, with the above mentioned arguments, the Examiner believes that the reference of Watanabe discloses the claimed features in the claim limitations.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, claim 1 contains the claim limitation of *"a size of the raster data stored in the print buffer being smaller than a size of image data to be printed by one scanning"*. The specification of the invention discloses that the image data is obtained by dividing a data amount smaller than a data amount necessary of printing (compressed data) by scanning the printhead once on the printing medium. Since this section refers to the compressed data divided into blocks as shown in figure 5A and 5B, this part of the specification does not coincide with the claim amendment and thus, the claim amendment is considered as new matter. Claims 2-6 are rejected based on their dependency.

10. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Since the claim amendment does not coincide with the specification and the specification does not enable one of ordinary skill in the art to make or use the invention in the manner introduced by the claim amendment, the claim is deemed as not complying with the enablement requirement. The Examiner questions how one of ordinary skill in the art would be able to produce an image based on the invention's associated specification to enable the claimed feature of *"a size of the raster data stored in the print buffer being smaller than a size of image data to be printed by one scanning"*. In view of this rejection, the Examiner will address the other claimed limitations. The dependent claims of 2-6 are rejected based on their dependency.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase of *"a size of the raster data stored in the print buffer being smaller than a size of image data to be printed by one scanning"* renders the claim indefinite. The Examiner would like more clarity on the meaning of the claim amendment since the specification offers a different perspective on the *"data*

divided into blocks of a smaller amount than a data amount necessary for printing".

Claims 2-6 are rejected based on their dependency.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe '289 (USP 5689289).

Re claim 1: Watanabe '289 discloses a printing apparatus which divides a printing area in a scanning direction on a printing medium into a plurality of regions (i.e. in the system, the print head is used to print an area in a scanning direction representing multiple lines being read from a print buffer, which the multiple lines represents a plurality of regions in the document to be printed; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8) and has a print buffer for storing column data corresponding to the divided regions (i.e. the print buffer is used to store column data that has been recently converted to vertical data and this information is then printed as it is stored in the print buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8) a size of the raster data stored in the print buffer being smaller than a size of image data to be printed by one scanning, comprising:

input means for sequentially inputting block data corresponding to the divided regions and having a plurality of rasters (i.e. the system contains a 4-line buffer, considered as an input means, that can store four lines of converted image data that has been decoded by a programmed process of the CPU (111). The decoded data represents data that is dot image data, considered as a raster, and this data is stored in the 4-line buffer. There are one-line representations that are decoded into a dot image, or a raster, stored in the 4-line buffer and the 4-line buffer is able to store 4 lines, two after resolution conversion and two lines before resolution conversion. The 4-line buffer is able to then contain a plurality of rasters when storing these lines. Since the receiver buffer (202) receives data of one line from the 4-line buffer, the receiver buffer receives data sequentially from the 4-line buffer if the receiver buffer is empty. Therefore, the sequential transfer of data from the 4-line buffer to the receiver buffer is performed. Lastly, since the image data of one line of an overall image is stored in the 4-line buffer, the divided regions of an overall image are used to be transferred to the receiver buffer, see col. 3, ln 47 – col. 5, ln 64);

acquisition means for acquiring N-bit raster data from the block data input to said input means (i.e. the raster buffer, considered as the acquisition means, receives, or acquires, lines of memory with a certain bit value (8x3640 bits) from the centronics sender; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8);

conversion means for converting the raster data into column data (i.e. the horizontal-to-vertical conversion circuit performs the feature of converting the raster

information into vertical, or column data; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8);

transfer means for sequentially transferring the raster data acquired by said acquisition means to said conversion means (i.e. once the system realizes that the raster buffer has 8 line of memory stored in the buffer, this information is sent sequentially to the horizontal-to-vertical conversion circuit. Therefore, the feature of transferring the raster data to a converter to perform column conversion is performed; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8);

second transfer means for sequentially transferring N column data converted by said conversion means to the print buffer (i.e. in the system, the information in the memory that was converted into vertical information is then transferred to the print buffer once 8 lines is recognized to be stored and converted in the horizontal-to-vertical converter. This performs the feature transferring the converted data to the print buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8);

storage means for storing the N column data transferred from said second transfer means in the divided regions of the print buffer (i.e. the print buffer stores the vertical, or column data, transferred from the horizontal-to-vertical converter. The print buffer has 8 lines that represent 8 separate lines or regions of the print data that is stored in the print buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8); and

control means for executing transfer processing of said transfer means, transfer processing of said second transfer means, and conversion processing of said

conversion means in synchronism with a predetermined signal (i.e. the CPUs (111 and 215) control the execution transferring the image data from the facsimile to the printer, transferring the image data to the raster buffer and transferring the information in the raster buffer to the horizontal-to-vertical conversion circuit. The transfers of the image data is based on the signal that represents when a buffer reaches the 8 lines of memory in the respective buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8).

Re claim 5: The teachings of Watanabe '289 are disclosed above.

Watanabe '289 the apparatus according to claim 1, wherein said conversion means comprises holding means for holding N raster data transferred from said transfer means (i.e. the horizontal-to-vertical conversion means is able to store information that was transferred from the raster buffer that was being also stored in the raster buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8), and performs longitudinal/lateral conversion processing after said holding means holds the N raster data (i.e. the horizontal-to-vertical conversion means performs the vertical conversion to the data stored in the storage part of the device and this is performed once or after the data is being presently held in the conversion device; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8).

Art Unit: 2625

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe '289 in view of Iwasaki '403 (USP 6328403).

Re claim 2: The teachings of Watanabe '289 are disclosed above.

Watanabe '289 discloses the apparatus according to claim 1, wherein the block data contains a plurality of color component data (i.e. in the system, the data of the lines can be either black or white; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8).

However, Watanabe '289 fails to teach the divided region is further divided into second regions in correspondence with the number of color components.

However, this is well known in the art as evidenced by Iwasaki '403. Iwasaki '403 discloses the divided region is further divided into second regions in correspondence with the number of color components (i.e. shown in figures 12, 13 and 17 are illustrated regions that require knowing the amount of a color that correspond to the print heads used in the system. Depending on the printing codes and the value analyzed from the printing codes will determine the color data that is used for printing; see col. 7, line 13 – col. 11, line 56).

Therefore, in view of Iwasaki '403, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of the divided region is further divided into second regions in correspondence with the number of color components, incorporated in the device of Watanabe '289, in order to read out print data corresponding to the band position to be actually printed in units of colors (as stated in Iwasaki '961 col. 7, lines 27-65).

17. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe '289, as modified by Iwasaki '403, and further in view of Clark '856 (USP 7265856).

Re claim 3: The teachings of Watanabe '289 in view of Iwasaki '403 are disclosed above.

However, Watanabe '289 in view of Iwasaki '403 fails to teach the apparatus according to claim 2, wherein the block data contains a code representing a data delimiter between first color component data and second color component data.

However, this is well known in the art as evidenced by Clark '856. Clark '856 discloses the apparatus according to claim 2, wherein the block data contains a code representing a data delimiter between first color component data and second color component data (i.e. Clark '856 discloses using the printer firmware using the firegroup count and the offset data contained in the print header to be used to calculate the

beginning and the ending of each application of color on a page. The use of these two factors serves as a data delimiter; see col. 5, lines 31-61).

Therefore, in view of Clark '856, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of the apparatus, wherein the block data contains a code representing a data delimiter between first color component data and second color component data, incorporated in the device of Watanabe '289, as modified by the features of Iwasaki '403, in order to calculate the beginning and the ending points for application of a color (as stated in Clark '856 col. 5, lines 31-61).

Re claim 4: The teachings of Watanabe '289, as modified by Iwasaki '403, and further in view of Clark '856 are disclosed above.

Watanabe '289 discloses the apparatus according to claim 3, wherein said acquisition means outputs a second predetermined signal to said conversion means (i.e. in the system of Watanabe '289, when the CPU of the printer outputs a code to the respective buffer containing a certain amount of lines to be printed, this signal representing the memory information is output to the horizontal-to-vertical conversion means once the image information is determined to not contain all-white information and is 8 lines; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8).

However, Watanabe '289, as modified by Iwasaki '403, and further in view of Clark '856 fails to teach when the code is determined.

However, this is well known in the art as evidenced by Iwasaki '403. Iwasaki '403 discloses when the code is determined (i.e. in the system of Iwasaki '403, the print codes are analyzed and are determined by the code analyzing means (616). When the codes are determined, a signal is given to the developing means to develop the data in order to be stored in the print buffers; see col. 7, line 16 – col. 11, line 56).

Therefore, in view of Iwasaki '403, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of when the code is determined in order to have print data analyzed and developed based on the analyzed print data (as stated in Iwasaki '403 col. 5, lines 1-11).

18. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe '289, as modified by Iwasaki '403 and Clark '856, and further in view of Iwasaki '961 (US Pub No 2002/0175961).

Re claim 6: The teachings of Watanabe '289 in view of Iwasaki '403 are disclosed above.

Watanabe '289 discloses the apparatus according to claim 4, wherein said conversion means comprises holding means for holding N raster data transferred from said transfer means (i.e. the horizontal-to-vertical conversion means is able to store information that was transferred from the raster buffer that was being also stored in the raster buffer; see

figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8), and when the second predetermined signal is input while said holding means holds M ($M < N$) raster data (i.e. in the system, when one line that is all white is interpreted, a signal is input into the system describing that fact. This signal occurs when the raster means is holding the a certain amount of raster information that is not greater than a certain number; (i.e. the horizontal-to-vertical conversion means is able to store information that was transferred from the raster buffer that was being also stored in the raster buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8), sets data in said holding means (i.e. in the case when the all white data signal is input into the system, the next image data is set in the raster buffer corresponding to the area of the next line; (i.e. the horizontal-to-vertical conversion means is able to store information that was transferred from the raster buffer that was being also stored in the raster buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8) and then performs longitudinal/lateral conversion processing (i.e. the horizontal-to-vertical conversion means performs the vertical conversion to the data stored in the storage part of the device and this is performed once or after the data is being presently held in the conversion device that was sent from the raster buffer; see figs. 3-6 and 8; col. 3, line 47 – col. 8, line 8).

However, Watanabe '289 in view of Iwasaki '403 and Clark '856 fails to teach sets $(N-M)$ "0" data in said holding means.

However, this is well known in the art as evidenced by Iwasaki '961. Iwasaki '961 discloses sets $(N-M)$ "0" data in said holding means (i.e. Iwasaki '961 discloses setting data of one random number area to be 1 while setting others to be the number of zero.

This is expressed in figures 7a and 7b. The mask in the RAM (604) memory is set to one, while other masks are set to zero; see figs. 7-10; paragraphs [0076]-[0086]).

Therefore, in view of Iwasaki '961, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of sets (N-M) "0" data in said holding means in order to permit or prohibit printing of a dot in a certain area of an image (as stated in Iwasaki '961 paragraph [0078]).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Nohata '656 (US Pat No 6111656) discloses a image communication apparatus that is able to acquire image data information and transfers the information within the equipment through several buffers and units for conversion before printing the image data.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is (571)270-1351. The examiner can normally be reached on Mon. thru Thur. 9:00-6:30 Fri. 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571)-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
/Chad Dickerson/
Examiner, Art Unit 2625

Art Unit: 2625

/Twyler L. Haskins/

Supervisory Patent Examiner, Art Unit 2625